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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,189	11/08/2000	Michael A. Mayor	0918.0054C	1150

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EXAMINER

PHAN, TRI H

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,189

Applicant(s)

MAYOR ET AL.

Examiner

Tri H. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4 and 5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kleider et al.** (U.S. 6,154,489).

- In regard to claims 1, 8 and 21, **Kleider** discloses in Figs. 1-15 and in the respective portions of the specification about the adaptive arrangement and method for adaptive-rate coded digital transmission of image over the wireline/wireless communication link or radio frequency path (For example see Abstract; Fig. 1), wherein the system determines the new critical operating points for the current channel conditions when the previous operating parameters are no longer optimal to the varying communication channel conditions (For example see col. 2, lines 21-36); wherein the channel status, e.g. 'state of the channel', is determined by measuring the quality, S/N, SER, or BER of the received signal from the channel status monitor and the initial state of the critical operation points 'Op_{crit} (i)' ("*initial set of parameter values*") is set by the channel status estimator for the system at the current channel condition state ("*determining RF conditions and selecting the initial set of parameter values*"; For example see col. 2, lines 45-65; col. 6,

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lines 38-43) and provided to the transmitter (“*transmitter*”); at the receiver (“*receiver*”), the new set of critical operating parameters ‘ $Op_{crit}(i+1)$ ’ (“*potential candidates of others sets of parameter values*”) computed by the channel status estimator for the system are used for comparing with the ‘ $Op_{crit}(i)$ ’ to determine which critical parameters change and to what degree of change is required (For example see Figs. 2-10; col. 2, line 65 through col. 3, line 10) based on the channel status such as very bad, bad, nominal or very good state (For example see col. 9, lines 11-42) for increasing/reducing the power or transmission rate (“*less than*”; For example see Fig. 8; col. 7, lines 36-50), where the system is accordingly adaptive to and operates optimally for the current varying communication channel conditions (“*high expected performance*”) as disclose in details in Figs. 2-10. **Kleider** does disclose about the invention is implemented in software and hardware (For example see col. 6, line 65 through col. 7, line 3), but fails to explicitly disclose about the “*processor*” as in claimed invention 21. However, it is obvious that a “*processor*” is needed to execute the software program in order to perform functions such as monitoring the received signals, comparing between new and old states of the critical operation points and optimally selecting the correspondence choices at the current channel condition state. **Kleider** also discloses about the states of the channel status such as very bad, bad, nominal or very good state and the count of the channel status vector in accordance with the critical value N_{crit} in order to re-synchronization the signal (For example see col. 8, lines 30-51), but fails to explicitly disclose about the “*predetermined amount*” in comparing the values between the two set of parameters, e.g. initial/new states of the critical operation points. However, it is obvious that the channel status such as very bad, bad, nominal or very good state are based on some degrees of change, e.g. ‘threshold values’ disclosed in col. 16, lines 30-37, to compare with and

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to determine the states of the channel, and where the threshold values are changed from system by system and depended on the designed choices of the system engineering to set the values on the software program.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide the threshold values as “*predetermined amount*” in determining the degree of change states of the channel status as taught by **Kleider**, with the motivation being to specify the degree of changes by comparing with the “*predetermined amount*” or threshold values rather than the states such as very bad, bad, nominal or very good of the channel status.

- Regarding claims 2, 12 and 25, **Kleider** further discloses that the new set of critical operating parameters ‘ $Op_{crit}(i+1)$ ’ are used to compare with the set of critical operating parameters ‘ $Op_{crit}(i)$ ’ (For example see col. 3, lines 1-10) and stored in the memory (“*previous set of parameter values*”; For example see col. 7, lines 36-50) in order to calculate any necessary changes in the transmission parameters by reducing/increasing the power or transmission rate (“*more than*”; For example see Fig. 8; col. 7, lines 36-50) for the optimizing channel condition. **Kleider** does disclose about the states of the channel status such as very bad, bad, nominal or very good state and the count of the channel status vector in accordance with the critical value N_{crit} in order to re-synchronization the signal (For example see col. 8, lines 30-51), but fails to explicitly disclose about the “*predetermined amount*” in comparing the values between the two set of parameters, e.g. initial/new states of the critical operation points. However, it is obvious that the channel status such as very bad, bad, nominal or very good state are based on some

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degrees of change, e.g. 'threshold values', to compare with and to determine the states of the channel, and where the threshold values are changed from system by system and depended on the designed choices of the system engineering to set the values on the software program.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide the threshold values as "*predetermined amount*" in determining the degree of change states of the channel status as taught by **Kleider**, with the motivation being to specify the degree of changes by comparing with the "*predetermined amount*" or threshold values rather than the states such as very bad, bad, nominal or very good of the channel status.

- In regard to claims 3-4, 13-14 and 26-27, **Kleider** further discloses that the channel status vector $CS(i)$ ("*system state vector*") is set as old channel status CS_O ("*pre-computed weight*"), compares with the estimated channel status vector $CS'(i)$ set as new channel status CS_N in comparing the state of the current system state $S(i)$ ("*system state transformation*") with the estimated system state $S'(i)$ to determine the channel status as very bad, bad, nominal or very good state and provide the optimizing channel condition ("highest performance") (For example see col. 7, line 51 through col. 9, line 42).

- Regarding claims 5-7, 15-16 and 28-29, **Kleider** further discloses that the initial state of the critical operation points ' $Op_{crit}(i)$ ' ("*initial set of parameter values*") are determined by calculating the quality, SNR, SER, BER, etc. (For example see col. 2, lines 45-55; col. 7, lines

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36-50) for increasing/reducing the power or rate in transmission data (For example see col. 2, lines 2-14).

- In regard to claims 9-11, 20, 22-24 and 33, **Kleider** further discloses that the receiver determines the quality of the signal received from the transmitter ("*peer-to-peer*"; For example see Fig. 1; col. 6, lines 16-21) using the mobile application over the wireless communication system ("*mobile wireless*"; For example see col. 6, lines 44-45; col. 14, lines 31-33) for optimizing channel condition for transmission video images ("*video data*"; For example see col. 1, lines 14-17; col. 16, lines 38-40); wherein the new set of critical operating parameters 'Op_{crit}(i+1)' ("*potential candidates of others sets of parameter values*") is computed by the channel status estimator on received signals ("*set of parameter value*"; For example see col. 3, lines 1-10).

- Regarding claims 17-19 and 30-32, **Kleider** does disclose about the adaptive method using in the wireless communication system, which can be used in the spread spectrum communication systems (For example see col. 2, lines 11-14); but fails to specifically disclose about the "*CSMA/CA, CDMA, FDMA*". However, CSMA/CA, CDMA, FDMA techniques are well known in the art for modulating signal in the communication system. Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use CSMA/CA, CDMA, FDMA techniques for the modulation communication technique in the **Kleider**'s system.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Labeledz et al. (U.S.6,072,778), **Hayakawa** (U.S.6,708,042), **Bark et al.** (U.S.6,445,917), **Larsen et al.** (U.S.6,097,703) and **Blakeney, II et al.** (U.S.6,421,374) are all cited to show devices and methods for improving the controlling service and rate in the communication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (703) 305-7444. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Olms can be reached on (703) 305-4703.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 305-3900.



Tri H. Phan
March 25, 2004



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